

WHAT IS CLAIMED IS:

1. A printing method using a first printing material and a second material that is of the same color as that of the first printing material and has higher development density than that of the first printing material, to print an image on a printing medium, said method comprising:

10 a selecting step for selecting a printing mode to be used for printing from a one-side printing mode in which printing is performed on only one side of the printing medium and a two-side printing mode in which printing is performed on both side of the printing medium; and

15 a determining step for determining a printing condition according to the printing mode selected in said selecting step,

wherein said determining step (A) determines the printing condition so that printing is performed with use of the first and the second printing material, when the one-side printing mode is selected in said selecting step, and (B) determines the printing condition so that printing is performed with use of the second printing material but without use of the first printing material, when the two-side printing mode is selected in said selecting step.

25 2. A printing method using a first printing material having relatively lower development density and a second printing material having relatively higher development

density for the same color, to print an image on a printing medium, said method comprising:

5 a setting step for setting one printing mode of a one-side printing mode in which printing is performed on only one side of the printing medium and a two-side printing mode in which printing is performed on both side of the printing medium; and

10 a generating step for generating printing data according to the printing mode set in said setting step,

15 wherein said generating step generates the printing data so that the first printing material is used at smaller amount and the second printing material is used at greater amount when the two-side printing mode is set, in comparison with when the one-side printing is set.

3. A printing method as claimed in claim 2, wherein said generating step generates the printing data so that a maximum value is set as the amount of the first printing material, which is set in a condition that lightness changes 20 from a specific lightness to a predetermined darker lightness in a predetermined hue, and is set such that the amount of the first printing material is increased up to the predetermined darker lightness and is decreased from the predetermined darker lightness, and the maximum value 25 of the two-side printing mode is set as smaller value and at brighter lightness in the change of the lightness than that for the one-side printing mode, and generates the

printing data so that the amount of the second printing material is increased as the amount of the first printing material is decreased from the predetermined darker lightness.

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4. A printing method as claimed in claim 3, wherein said generating step generates the printing data so that the amount of the second printing material is set as the amount greater than 0 at the lightness at which the amount of the first printing material has its maximum value.

10 5. A printing apparatus for using a first printing material and a second material that is of the same color as that of the first printing material and has higher development density than that of the first printing material, to print an image on a printing medium, said apparatus comprising:

15 selecting means for selecting a printing mode to be used for printing from a one-side printing mode in which printing is performed on only one side of the printing medium and a two-side printing mode in which printing is performed on both side of the printing medium; and

20 25 determining means for determining a printing condition according to the printing mode selected by said selecting means,

wherein said determining means (A) determines the printing condition so that printing is performed with use

of the first and the second printing material, when the one-side printing mode is selected in said selecting step, and (B) determines the printing condition so that printing is performed with use of the second printing material but 5 without use of the first printing material, when the two-side printing mode is selected by said selecting means.

6. A printing apparatus for using a first printing material having relatively lower development density and 10 a second printing material having relatively higher development density for the same color, to print an image on a printing medium, said apparatus comprising:

setting means for setting one printing mode of a one-side printing mode in which printing is performed on 15 only one side of the printing medium and a two-side printing mode in which printing is performed on both side of the printing medium; and

generating means for generating printing data according to the printing mode set by said setting means, 20

wherein said generating means generates the printing data so that the first printing material is used at smaller amount and the second printing material is used at greater amount when the two-side printing mode is set, in comparison with when the one-side printing is set.

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7. A printing apparatus as claimed in claim 6, wherein said generating means generates the printing data so that

a maximum value is set as the amount of the first printing material, which is set in a condition that lightness changes from a specific lightness to a predetermined darker lightness in a predetermined hue, and is set such that the 5 amount of the first printing material is increased up to the predetermined darker lightness and is decreased from the predetermined darker lightness, and the maximum value of the two-side printing mode is set as smaller value and at brighter lightness in the change of the lightness than 10 that for the one-side printing mode, and generates the printing data so that the amount of the second printing material is increased as the amount of the first printing material is decreased from the predetermined darker lightness.

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8. A printing apparatus as claimed in claim 7, wherein said generating means generates the printing data so that the amount of the second printing material is set as the amount greater than 0 at the lightness at which the amount 20 of the first printing material has its maximum value.